

In re Patent Application of:
MCGETTIGAN ET AL.
Serial No. 10/785,589
Filed: 02/23/2004

CLAIMS

- 1.(original) An anti-aliasing filter comprising:
a substrate;
a first double-refraction plate ("DRP") of the anti-aliasing filter having at least
a first liquid photo-polymerization ("LPP") layer connected to the substrate, and
a first liquid-crystal polymer ("LCP") layer disposed on the first LPP layer, the first DRP having a thickness selected so as to provide a selected separation of ordinary and extraordinary light rays.
- 2.(original) The anti-aliasing filter of claim 1 wherein the first LPP layer is disposed on the substrate.
- 3.(original) The anti-aliasing filter of claim 1 further comprising an intervening layer disposed between the substrate and the first LPP layer.
- 4.(original) The anti-aliasing filter of claim 1 further comprising a second LCP layer disposed on the first LCP layer.
- 5.(original) The anti-aliasing filter of claim 4 wherein the first LPP layer has a selected orientation and the second LCP layer has the selected orientation.
- 6.(original) The anti-aliasing filter of claim 1 wherein the thickness is between about 10 microns and about 150 microns.

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7.(original) The anti-aliasing filter of claim 1 further comprising:

a first anti-reflective filter disposed on a first surface of the anti-aliasing filter; and

a second anti-reflective filter disposed on a second surface of the anti-aliasing filter.

8.(original) The anti-aliasing filter of claim 7 wherein the second anti-reflective filter is disposed on the first DRP.

9.(original) The anti-aliasing filter of claim 7 wherein the second anti-reflective filter is disposed on a second substrate, the second substrate being affixed to the first DRP.

10.(original) The anti-aliasing filter of claim 9 wherein the second substrate is affixed to the first DRP with optical adhesive so as to provide index matching between the first DRP and the second substrate.

11.(original) The anti-aliasing filter of claim 1 further comprising:

a retarder plate disposed on the first DRP; and

a second DRP disposed on the retarder plate.

12.(original) The anti-aliasing filter of claim 11 wherein the retarder plate and the second DRP are selected so as to provide a two-dimensional anti-aliasing filter for at least one color of light.

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13.(original) The anti-aliasing filter of claim 11 wherein the first DRP, the retarder plate and the second DRP are selected so as to provide a one-dimensional anti-aliasing filter for a first color of light and a two-dimensional anti-aliasing filter for a second color of light.

14.(original) The anti-aliasing filter of claim 11 wherein the retarder plate includes a plurality of quarter-wave retarder plates.

15.(original) The anti-aliasing filter of claim 11 wherein the first DRP, the retarder plate, and the second DRP are all made from an LPP material and an LCP material.

16.(original) The anti-aliasing filter of claim 11 wherein the first DRP is made from a first LPP material and a first LCP material, and the retarder plate is made of a second LPP material and one of the first LCP material and a second LCP material.

17.(original) The anti-aliasing filter of claim 11 wherein the substrate is infrared-blocking color glass.

18. (original) The anti-aliasing filter of claim 17 further comprising an infrared-blocking filter.

19.(original) The anti-aliasing filter of claim 11 further comprising an infrared-blocking filter.

20.(original) The anti-aliasing filter of claim 1 further comprising:

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a package; and
a photodetector array disposed within the package, the
anti-aliasing filter being disposed on the package.